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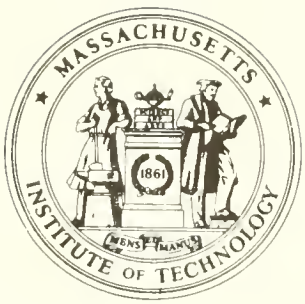

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ADAPTATION AND INTEGRATION AS A PLANNING PROCESS

Peter Lorange
Ilene S. Gordon
Richard G. Smith

WP 897-76

December 1976

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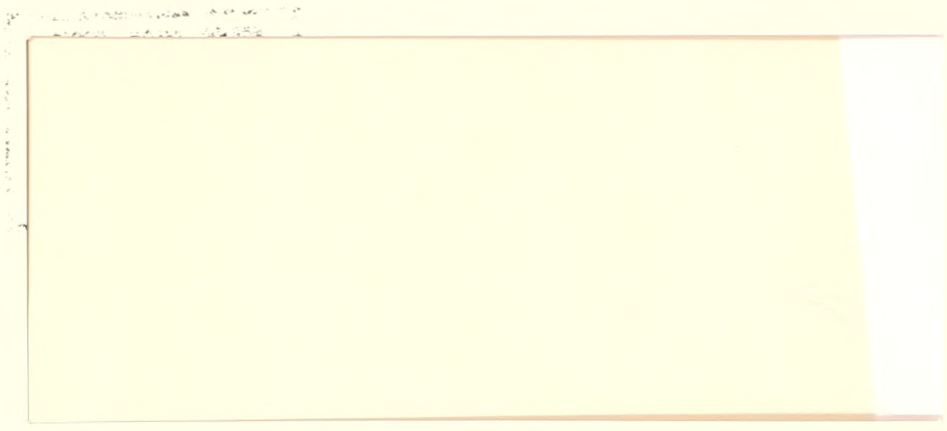

ADAPTATION AND INTEGRATION AS A PLANNING PROCESS

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In this article we shall first outline several propositions about planning as part of an integrated administrative system. We shall then report findings from field studies of eleven companies - four within the airline industry and seven in the clinical laboratory industry - in terms of how our propositions can be identified in and reconciled with the planning practices of these companies. The nature of this research is exploratory.

Four Propositions About an Integrated Administrative Planning System

A. One planning process - two elements of the process.

The planning and control activities of a corporation - be it large or small - may be divided into two types. First, we have the task of adapting the company's general direction, i.e., its strategies, to new threats and opportunities that can be seen or perceived in the firm's environment. Second is the issue of integrating the (often diverse) on-going activities of the company so that actions of various parts of the corporation, such as interdivisional programs, investment projects, etc., are coordinated to facilitate efficient implementation of the firm's strategies. While adaptation focuses on the development and revision of the corporation's strategies, an important aspect of integration will be the monitoring of performance progress towards successful strategy implementation.

B. Adaptive/Integrative Balance in the System

There will be a balance in a planning system in terms of its adaptive/integrative capabilities, and this should be seen as a way that the

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adaptive/integrative balance is "right" for a particular company at a given point in time, reflecting the uniqueness of the corporate setting. Situational design is therefore essential.[1] In particular, there shall be three classes of relevant situational factors; the financial position of the company as evidenced by the position it has on the product life-cycle; the degree of turbulence in the company's environment; and the degree of complexity of the company's strategies and organizational structure.

C. Managing the Adaptive/Integrative Balance through a Firm's Life-cycle.

Given that the environment of the company will change over time and that the internal structure of the firm probably changes as well, it will be important to reassess periodically the adaptation/integration balance; does it continue to fit the prevailing situational setting? It will therefore be important to manage the evolution of the planning system.

D. Effectiveness of Planning.

The question of what results to expect from organizational posture on adaptation/integration has a general effectiveness side as well as a more specific side.[2] In the more general sense there will probably be signi-

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1. See Lorange, Peter and Richard F. Vancil, "How to Design a Strategic Planning System," Harvard Business Review, Sept. - Oct. 1976.

2. Numerous attempts have been made in measuring the effectiveness of planning. However, conclusive results have not yet appeared. Neither has a universally acceptable effectiveness measurement methodology yet been developed. See, for instance, Thune, S. and R. House, "Where Long-Range Planning Pays Off," Business Horizons, August 1970; Harold, David M., "Long Range Planning and Organizational Performance: A Cross-Valuation Study", Academy of Management Journal, March, 1972, and Ansoff, H. Igor, J. Avner, R.G. Brandenburg, F.E. Porter and R. Radosevich, "Does Planning Pay? The Effect of Planning on Success of Acquisitions in American Firms," Journal of Long Range Planning, Vol.3 No. 2, Dec. 1971, and Karger, D.W., "Integral Formal Long Range Planning and How to Do It", Journal of Long Range Planning, Vol. 6, No. 4, Dec. 1973.

ficant organizational benefits from enabling the corporation to fulfill its adaptation/integration tasks through planning in such ways that both satisfactory adaptation and internal efficiency from operations will be achieved. This might lower the need for the so common "stop-and-go" adjustments of a corporation's adaptive/integrative capabilities. Most expensive, of course, will be extensive reorganizations. Introduction of, say, new internal reporting systems, modifications in the MIS system, etc., will also cause disturbance. An evolving planning system which is managed so that it provides appropriate adaptation/integration support is therefore probably cost effective in that it cuts down on major systems changes in general. One measure of planning's effectiveness then will be the degree of frequency of major organizational and other systems changes.

A second area of effectiveness measurement would be to inspect the planning system for inconsistencies or areas of incompleteness. Such defect indicators might be whether adaptation planning exists at all, whether the organization is misled in such a way that adaptation/integration becomes one process and is not isolated or independent. A third indicator would be to assess the extent to which the company actually has been able to develop a viable strategy and to follow this in a consistent manner over some period of time.

Two series of case studies follow which together attempt to illustrate the four propositions just discussed. While the first set of four cases of the airlines industry clearly describes actual planning processes, formal planning systems and their effect on an organization, the second set of seven cases of the clinical laboratory industry ex-

amines the overall effectiveness of formal planning systems and the need for a balance between integration and adaptation.[3]

It should be stressed that the choice of companies from two industries, in order to allow intercompany analysis within each industry and test for the relevance of our four propositions across industries, will not allow a detailed intercompany analysis within all eleven companies irrespective of industry. Thus, as a consequence we shall not attempt to undertake a detailed reconciliation of the airline companies with the clinical laboratory companies.

The Airline Industry[4]

Airline companies face the dual tasks of adaptation to environmental change and integration of complex interfunctional activities. A number of environmental factors were perceived as particularly important by the executives in the four companies studied:

a) Regulatory and Political: regulatory unpredictabilities and rigidities, disincentives to innovation, delays in route changes, effects of political interference, inadequate governmental transportation and energy planning;

b) Industry Structure: technological change, developments in alternate transportation modes, increasing rate of change;

c) Demand: market demand levels and preferences, moves by

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3. For a discussion of the research methodology, see Gordon, Ilene S., The Clinical Laboratory Industry: Strategy, Structure, Third Party Involvement and Their Link to Corporate Planning, Master's Thesis, Massachusetts Institute of Technology, Cambridge, 1976, and Smith, Richard G., Adaptive and Integrative Planning by Airlines, Master's Thesis, Massachusetts Institute of Technology, Cambridge, 1976.

the competition, uneconomic local service demands;

d) Supply: fuel costs, staff and equipment lead times, openness of the capital markets.

Similarly, the airline executives identified a number of important integrative tasks:

a) Operations: integration of equipment, staff, and advertising with the flights schedule;

b) Organization: intraorganizational goal congruence, committment to plans, and communication;

c) Performance: integration of flights schedule with financial targets, productivity improvements, costs control.

In each of the four companies studied the relative importance of the environmental factors and integrative problems cited varied. For each case studied we shall present the company's situational setting, describe its corporate planning process, cite a concrete example of how a specific strategic issue was handled, and cite an impressionistic judgement as to the appropriateness of the company's planning process with particular reference to the adaptive/integrative planning balance.

A. Airline I

Airline I is a large international carrier, owned privately and subject to regulatory control by its home country and through a multitude of bilateral agreements. The airline needs a capacity to adapt to changes initiated by a number of foreign governments acting unilaterally or in concert with its own home government. Additionally, the airline faces a complex set of world markets in which diverse changes may occur from time to time. Organizationally the company is centralized. There are both functional and geographical divisions with the former being clearly the dominant organizational dimension.

Interfunctional coordination is the prime task of integrative planning in the company.

Formal flight schedule planning at airline I is centralized and managed by a fairly large planning department. Area division heads are not directly involved. The schedule planning process has a "front end" of assumptions regarding economies, the industry and other environmental factors. These are used to help select from the previous schedule the activities which will form the core elements for the forthcoming schedule plan. Marginal activities, past and proposed, are isolated and presented to top management along with the core elements. In recent years airline I had suffered from a fairly serious decline in profitability, due in large measure to an emphasis on integrative planning which was not balanced by an adequate capacity to adapt the organization to changing factors in its environment. A crisis was required before the company moved to change its strategy in response to environmental shifts. The central staffs then worked out a realignment of the corporation's posture relative to its environment, which required major changes in the company's operations. These were rapidly and successfully implemented through the integrative schedule planning process.

Now, on an unscheduled basis study is made of the implications of major environmental shifts which have affected the company. Major adaptative changes are then effected by widening the margin at the expense of the core elements in schedule planning.

B. Airline II

Airline II is a large U. S. carrier. Its route structure is mainly domestic and concentrated in one area of the country with some services to other areas. Civil Aeronautics Board regulatory controls apply. The environment is not as complex as that faced by airline I with respect to either the

market or the regulatory side. Nevertheless an adaptative capability is required because the airline faces a less diversified environment and changes in it will have a more profound and rapid effect on the airline's activities than similar change in only one part of airline I's environment. The company is organized on both a functional and a regional basis.

Adaptative planning is not formal and there is no defined process which structures the ways in which strategies resulting from adaptative planning can impact, guide and constrain the integrative side. No formal process exists to institutionalize corporate level adaptative changes, though such changes do occur through less well structured mechanisms. Adaptative and integrative planning are held together more by commonality of participants than by the planning process. Integrative planning is formal and the balance of emphasis is strongly in its favor. Planning is incremental and bottom-up. The process stresses consensus building through the management pyramid.

As an example of decision making methods it is worth citing an economically sensible alteration reached in airline II's route structure. This alteration was effected through implementation of various area head's views on changes in specific routes in their respective areas. The net effect was a degree of change in the corporation's strategic posture. It was brought about through a series of incremental bottom-up changes decided upon during the schedule revision process and not through explicit central decision. Certain advantages such as speed and completeness in revision to the company's strategic position were thereby lost.

Airline II had been less than profitable for some time. Its planning processes did not provide it with adequate capacity to adapt to environmental change. We believe that because the adaptative side of the planning process was informal the company was not able to manage the adaptative/integrative

balance with facility.

C. Airline III

Airline III is the nationally owned airline of a foreign government. Its route structure is diverse. It accepts public service responsibilities. Profitability of operations is a constraint rather than an objective to be maximized. Public service demands impact the airline through national and regional political processes. Altogether, the political and market environment to which the company must adapt is complex and diverse. The corporation is organized on both functional and geographical bases.

Much of airline III's planning process is formal, particularly on the integrative side. The company's approach assigns to a very small group of senior managers the responsibility to operate and to improve a formal planning process in which the substance of the integrative planning is carried out by the line organization. At the same time the director of the small planning unit advises the chief executive on adaptative questions.

Assumptions about the company's environment, strategies about where the company should be going and action programs to be explored or undertaken are revised or generated as the "front end" adaptative aspect of each planning cycle. In the light of these strategies proposed revisions to the prior flights schedule are generated by the area divisions and reviewed and assembled by the headquarters functional divisions for top management review and approval. It is important to note that corporate level adaptation preceeds and constrains organizational integration, and that adaptative sensitivity to local service demands is institutionalized through assignment to the area rather than the functional divisions of responsibility to initiate the specific schedule revisions, though within corporate guidelines. The present adaptative/integrative planning balance is weighted towards adaptation at the area division

level, towards integration, and away from corporate level adaptation.

This balance had had concrete effects on the corporation's strategy. For example, several years ago airline III made a corporate level adaptative decision to alter its market and dampen unit cost increases by concentrating on longer distance services. However, regional demand for local services by the national carrier had been internalized in the planning process through the important part which the area dimension of the organization plays in initiating schedule changes. Average flight length did increase over time, but not by a great amount.

Our assessment is that the balance in airline III is weighted in favor of adaptation at the area level and in favor of integration across functions, and that it is weighted against adaptation at the corporate level. Such a weighting is consistent perhaps with the airline's public service objective as long as its profitability constraint is easily met. Some time ago this company's profit picture had begun to deteriorate and overattention to local service demands was frequently cited as a cause. Hence we find that the balance in the company's planning process had become inconsistent with its profitability constraint.

D. Airline IV

Airline IV is a U. S. carrier, the smallest of those studied. Its route structure is largely domestic though it does provide some international services. Routes are concentrated in one part of the country with some services to other areas. It is regulated by the Civil Aeronautics Board. The regulatory and market environment to which the company responds is relatively simple. Organizationally the company is centralized.

The corporation's strategic stance in relation to its environment is determined explicitly by the chief executive. Overall corporate adaptative

strategy is very long term, decades, and powerfully directs the evolution of the company. Shorter range plans are more specific, time driven and action oriented. The role of staff and functional divisions is greater. Environmental instability does result in certain short run reactive change but does not result in chopping and changing the overall strategic plan. Linkage between the adaptative and integrative sides of planning is provide by the senior functional executives who advise the chief executive on adaptative strategy and who, as a management group, conduct the integrative planning.

Airline IV previously had a strategy similar to that of airline III of lengthening flight stage lengths in response to actual and anticipated environmental change. This strategy was determined centrally and was executed through a variety of centrally directed mechanisms for route and fleet restructuring. As did airline III, airline IV faced local resistance to some service level reductions and route pullouts. Airline IV, however, did not internalize local service pressures through it planning process, but saw them as external factors to be interpreted and acted upon. Resultant growth in average stage length has been much higher than was the case with airline III.

In summary, then, in all the companies studied we find planning processes with both adaptative and integrative characteristics. In the larger companies (I and II) continuous and formal adaptation in planning is weak in relation to their integrative capabilities. These two are also the most troubled financially. It is possible that integrative capability was developed in response to the increased complexity of undertaking action in a large corporation and that the weakness of an ongoing adaptative capability resulted from years of operation in a benevolent environment in the 1960's, a benevolence

which was not continued into the present decade.

The emphasis on adaptation to the environment at the geographical area division level in airline III is seen as a direct result of its commitment to service and its exposure to politics which have a regional base.

Airline IV's emphasis on corporate level adaptation is seen as a result of its self-selected status as a growth company and the relative homogeneity of its operations.

We find that changing corporate situations require corporations to manage the adaptative/integrative balance and that formalization of both sides of the process facilitates such management.

Finally we find that practices in integrative planning are relatively similar across the four cases studied as might be expected from the technological determinism of flying aircraft, but that practices on the adaptative side show a wide variability and are often not well related to the environmental circumstances which are present.

The Clinical Laboratory Industry[5]

We shall first illustrate the situational setting of each clinical laboratory. Three specific strategic archetypes of the seven laboratories will then be presented and compared, using quantitative performance data. Adaption and integration within the context of the clinical laboratory industry and the balance of the two will then be discussed. Finally, the issue of evolution of the strategic archetypes of the laboratories will be considered.

The following is a table which exhibits the situational setting of each

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5. For a more detailed account of the research reported in this section, see Gordon, Ilene S., op. cit.

clinical laboratory. There are three types of facilities of laboratories listed: central facility, satellites, and drawing stations. A central facility is one where most of the couriers deliver blood to be tested. A satellite is a smaller facility where some testing of blood is performed but most of the samples are sent to the central facility. Finally, a drawing station only takes blood from a patient and performs no tests.

EXHIBIT 1

Situational Settings

Lab	1975 Sales	National or Regional	Configuration	Pricing Posture	Mail Service	Comments
1	$ 2M	regional	one central facility, satellites	low	minimal	60% of sales from courier pick-ups, 40% direct referral to satellites
2	3.5M	regional	one central facility, satellites	low	none	operates in only one region
3	4M	regional	one central facility, satellites, drawing stations	low	minimal	operates in only one region; beginning to branch out
4	4.6M	regional	two central facilities, satellites	average	minimal	operates in two regions
5	6M	regional	one central facility, satellites	average	moderate	operates in one region, emphasis in on esoteric testing, also handles hospital testing
6	14.8M	national	one central facility, large drawing stations in 15 cities	low	moderate +	employs "hard sell" attitude, highly centralized operation
7	74M	national	28 regional-central facilities, drawing stations	average-high	minimal	emphasizes its staff of 100 pathologists

Focusing on the formal and informal planning issues of the study, it was hypothesized that those firms with formal planning systems were more effective than those without a planning system, and those with a balance between an integrative control mechanism and an adaptative long-range mechanism were most effective.

We first wanted to measure the effectiveness of the laboratories according to particular strategies. For this industry, then, summarizing the situational settings and the strategic patterns observed, there appear to be three main strategic archetypes:

a) Increase market share moderately, moderate profits;

Companies 1, 2, 3, 4, 5.

b) Increase market share rapidly. (at least in the short run), "Skim market" to achieve high profits, too;
Company 6.

c) Maintain high volume, increase market share rapidly, profits subordinated;
Company 7.

Three quantitative measures were used in considering the laboratories' effectiveness: growth in sales, profitability, sales/employee and operating profit before taxes over sales. Exhibit 2 gives a summary of this data used to measure effectiveness. Judgement of effectiveness was made on the available information as it "matched" the strategy pursued by each company. Several of the blocks in Exhibit 2 are blank as that data was unavailable to the authors. However, since the effectiveness of the laboratories has been measured according to a particular strategy, if a laboratory is not concerned with profitability, for instance, then it does not seem necessary to have that piece of data in making a judgement.

The first specific strategic archetype is that of increasing market share with moderate growth in sales and with moderate profits. Five firms -- 1, 2, 3, 4, and 5 -- fall into this category. Firms 3, 4 and 5 all have moderate to high moderate growth in sales with rates of 48 percent, 50 percent, and 58 percent, respectively. When looking at the operating profit before taxes/sales, 4 clearly is the winner at 9 percent, and has a sales/person employed figure of $25,000; the highest of all seven firms. Company 5 appears to have been the next most effective form with a sales growth rate of 50 percent, OPBT/Sales figure of 5.5 percent, and a sales/person employed figure of $19,600.

It is difficult to say which of the remaining three is the next most

EXHIBIT 2

Measures of Effectiveness for Evaluating Strategies

Labora-tory*	Growth in Sales (1974-1975)	Profitability	Efficiency Effectiveness		Effective Relative to Strategy
			Sales / Employee	OPBT / Sales	
1	25%		19.2k		No
2	25%		20 k		No
3	48%		19 k		Yes
4	58%	.58M	25 k	9%	Yes
5	50%	.2M	19.6k	5.5%	Yes
6	74%	1.6 M	24.7k	12.4%	Yes
7	12%	1.1 M		2.5%	Yes

*The laboratories are arranged according to rising sales.

effective since profit figures were not available. According to the given strategy, we would rate them as equally effective. Company 3 has a high growth rate with sales of 48 percent, but the lowest sales/person employed figure at $19,000. On the other hand, firms 1 and 2 have lower sales growth rates, but higher sales/person employed when compared to Company 3.

The second specific strategic archetype is that of increasing market share as soon as possible and "skimming the market" for high and easy profits. Company 6 is the only company which fits into this particular strategic plan. It seems to have been effective according to this strategy, with growth in sales for 1975 from 1974 of 70 percent. Its profits for 1975 were $1.6

million, with an operating profit before taxes/sales figure at 12.4 percent. In addition, the sales per person employed was $24,700, which is one of the highest of all the firms considered.

The third specific strategic archetype mentioned is that of maintaining high volume of sales and increasing market share, but with a low profit. This is the strategy of Company 7 and it is the only firm which falls into this category. According to this strategy, Company 7 appears to have been effective. It has maintained its high volume, and is increasing its market share slowly. However, profits have also been low for 1975 at approximately $1.1 million. For this whole corporation (individual clinical laboratory figures were not available) the operating profit before taxes over sales is low at 2.5 percent, also in line with the low profit. Additionally, 60 percent of this company's income before taxes is from clinical laboratory services. There is no other firm of the seven interviewed with which to compare Company 7 for this strategy. However, Company 7 seems to have been achieving its goals.

We will now discuss the substantive issues of adaptation and integration in this industry, as opposed to the design of formal planning which was considered in the airline industry example. This approach will be taken because the companies interviewed in the clinical laboratory industry are all small relative to those interviewed in the airline industry. In the context of the clinical laboratory industry, elements of integration of a formal planning system would be an awareness of the following:

a) The increase in quality control requirements for all clinical laboratories.[6]

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6. See Chambers, Robert W. and Heffernan, Henry G. A Statement Prepared for the Senate Health Subcommittee Hearings. Some Observations of The Clinical Laboratory Improvement Act of 1975. Washington, D.C.: Georgetown University School of Medicine, September 9, 1975.

b) Budgeting requirements in a changing environment

c) Changing laboratory personnel requirements

d) Changing laboratory billing requirements; i.e., many states passing laws that patients must be billed directly for laboratory services.

e) Increasing proficiency testing (resulting from poor results in the past)

f) Increasing automation in the industry, such as new highly automated testing machines

Elements of "adaptation" in the formal planning system would be an awareness of the following:[7]

a) Changing nature of Medicare/Medicaid reimbursement policies

b) The possibility of the new Clinical Laboratory Improvement Act-1976 being passed[8]

c) The coming of national health insurance

d) Increasing government involvement in the industry

e) Influence of malpractice suits increasing

f) Rise of health maintenance organizations (HMO's) and of group practices

g) Trend towards preventive medicine

A planning system can only be considered effective according to a particular strategies. Exhibit 3 gives an account of the degree of consistency of the formal planning systems of the laboratories with particular

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7. For an in-depth consideration of these issues, please see Gordon, Ilene S., op. cit. or Bailey, Richard M.; Cox, Elizabeth C.; and Tierney, Jr., Thomas M. The Economics of the Clinical Laboratory Industry. Berkeley: University of California, Institute of Business and Economic Research, April 1975.

8. The Clinical Laboratory Improvement Act-1975 (now called CLIA-1976) has been passed by the Senate, and is before the Health Subcommittee in the House at the time of this writing (September 1976).

strategies. The factors mentioned previously have been considered in evaluating the existence of adaptation and integration in the formal planning system. Therefore, a "yes" answer in Exhibit 3 indicates an awareness of some or all of these factors and a meshing of this awareness into the formal strategic plans. The answer of "informal" indicates an awareness of some or all of the factors but there does not exist a formal meshing of them into the strategic plans.

EXHIBIT 3

The Effectiveness of Formal Planning Systems

Lab	Formal Planning		Degree of Consistency With Strategy
	Adaptation	Integration	
1	Informal	Informal	No
2	Informal	Informal	No
3	Informal	Yes	Yes
4	Informal	Yes	Yes
5	Informal	Yes	Yes
6	Yes	Yes	Yes
7	Yes	Yes	Yes

In comparing Exhibits 2 and 3, one may observe that the "effective relative to strategy" column of Exhibit 2 and the "Degree of Consistency with Strategy" column of Exhibit 3 are identical. This infers that adaptation and integration and an appropriate balance are necessary for a firm to operate effectively according to a particular strategy. It may be assumed that most firms have a general strategy and that some strategies are better than others. However,

those firms which are most effective, relative to their strategy, also operate with a formal or semi-formal planning system and incorporate their strategy into the planning system.

A further observation relates to the evolution of these clinical laboratories. As the laboratories have grown in sales, the level of formal planning has evolved. If one looks at the five companies of the first strategy, then the company of the second strategy, and then the company of the third strategy, one may observe three stages:

EXHIBIT 4

The Evolution of Clinical Laboratories

Stage I	Stage II	Stage III
1, 2, 3, 4, 5	6	7

The balance between integration and adaptation in the evolution of the industry must be considered. It seems that at the stage of strategy one, the firms are small and still growing. The appropriate balance seems to lean towards a combination of formal integration and informal adaptation. At this point, there is a need to emphasize long-range growth plans which can only be done by considering the external environment. As the firm grows larger, to the extent of the company operating with strategy two (Company 6), both adaptation and integration must be emphasized. The company must maintain firm control with its formal integration, but at the same time adaptation and awareness of the external environment must become formalized. As the firm's sales grow even larger, to the extent of Company 7, it is even more important to include adaptation in the formal planning system. Control is important as

well as foreseeing any environmental changes which may affect the industry as a whole or this individual company. Not only must adaptation become more formalized, but the total administrative system must be dynamic. As the firm grows and continues through the life cycle of the industry, management must be ready to change the balance of adaptation and integration.

The clinical laboratory industry has served as an example to prove the effectiveness of formal planning systems. Moreover, it has demonstrated the need for a balance between adaptation and integration, and the need for a dynamic planning system.

Conclusions

We have examined the relevance of four propositions about the design of formal planning systems in the context of eleven companies, four from the airline industry and seven from the clinical laboratory industry. Our first proposition said that the planning process consists of two distinctive activities, adaptation of the company's strategies to environmental opportunities and threats, and integration of the diverse patterns of ongoing activities of the firm so that a satisfactory long-term efficiency can be achieved. In general, we were able to identify these dual aspects of planning in all companies. This proposition definitely seemed to have merit.

Our second proposition stated that there should be a balance between the adaptation and the integration emphasis of the planning system, determined as a function of the firm's situational setting, its stage of development, the degree of turbulence in its environment and the complexity of its organization. This proposition, too, seemed to be generally valid. Particularly when applied to the airlines, which because of their larger size had more elaborate formal

planning systems than the clinical laboratories, it seemed clear that the systems were considerably different, reflecting different tailor-making needs of the various companies.

Our third proposition stated that the balance between the adaptation and the integration emphasis of the system should be managed so that the planning system would stay tailor-made to a company's evolving situational setting. We also found examples that tended to verify this, both in examining the evolution of the planning history of the airline companies, and in the clinical laboratories which seemed to evolve from one strategy to another and with differing planning requirements and needs.

Our final proposition stated that the effectiveness of a planning system might be assessed by judging the frequency of major changes in the approach to planning, by judging whether the adaptation/integration capability that the planning system seems to provide matches the adaptation/integration need of the company, and finally, whether there are major inconsistencies or apparent areas of ommission in the system. Here too, we felt that the field data provided support for the usefulness of assessing planning effectiveness this way.

In general, then, our propositions for considering planning systems seem to match reasonably comfortably with what we might find when analyzing planning practices of real-life corporations. Thus, we have a starting-point for further research into this area, and we should now be able to consider each of our propositions more systematically and over a wider variety of corporate settings.

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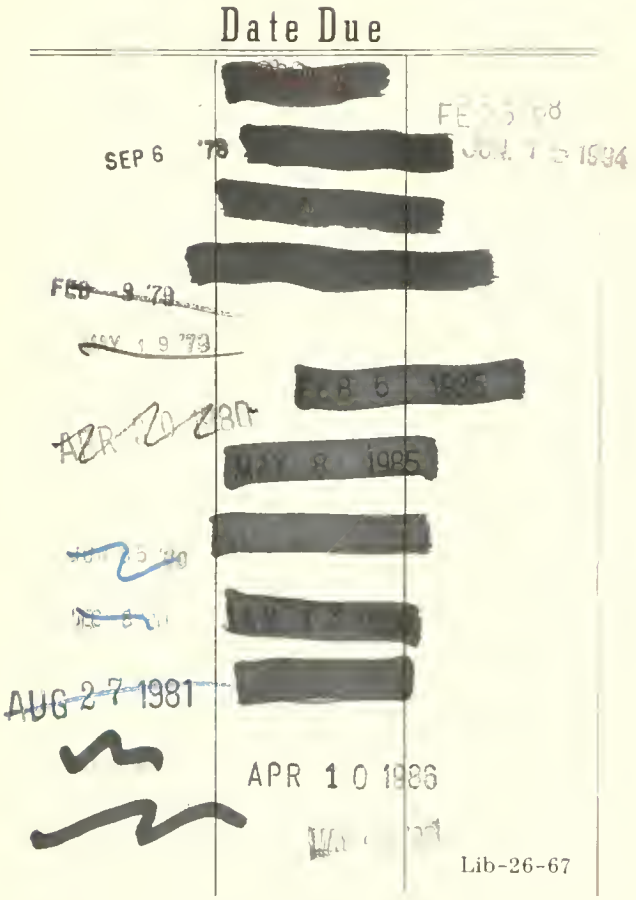
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